

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark  
Office  
(Box PCT)  
Crystal Plaza 2  
Washington, DC 20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 24 August 1998 (24.08.98)	
International application No. PCT/US98/00800	Applicant's or agent's file reference 3161-18-PCT
International filing date (day/month/year) 14 January 1998 (14.01.98)	Priority date (day/month/year) 14 January 1997 (14.01.97)
Applicant BERRY, Alan et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
30 July 1998 (30.07.98)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election
- ☒
- was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Jocelyne Rey-Millet
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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/00800

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : C12P 19/26; C12N 1/00, 1/21  
US CL : 435/84; 252.3, 252.33, 254.11

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/84; 252.3, 252.33, 254.11, 320.1, 193; 536/23.2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Extra Sheet.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	McKNIGHT et al. Molecular cloning, cDNA Sequence, and Bacterial Expression of Human Glutamine:Fructose-6-phosphate Amidotransferase. Journal of Biological Chemistry. 15 December 1992, Vol. 267, No. 30, pages 25206-25212, especially figure 5.	22, 27-29, 34, 36-38, 1-4, 14-16, 18-19, 21
X	FERNANDEZ-HERRERO et al. glmS of Thermus thermophilus HB8: an essential gene for cell-wall synthesis identified immediately upstream of the S-layer gene. Molecular Microbiology. 1995, Vol. 17, No. 1, pages 1-12, especially figure 7.	22, 27-29
X	DUTKA-MALEN et al. Molecular cloning and overexpression of the glucosamine synthetase gene from Escherchia coli. Biochimie. 1988, Vol 70, pages 287-290, entire document	22, 27-29

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

29 MARCH 1998

Date of mailing of the international search report

11 MAY 1998

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/00800

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MARIE et al. Rhizobium leguminosarum has two glucosamine synthases, GlmS and NodM, required for nodulation and development of nitrogen-fixing nodules. Molecular Microbiology. 1992, Vol. 6, No. 7, pages 843-851, entire document.	22, 23, 27-29

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/00800

## B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

APS, STN-CAS files medline, embase

search terms: glucosamine, glutamine-fructose-6 phosphate transaminase, recombinant proteins, molecular cloning,  
nag?, glm?, nod?